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Measuring Financial Development Via Index-Based Approaches: An Evidence From Selected OIC Countries

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This conceptual paper explores the multifaceted nature of financial development. With a specific focus on selected Organization of Islamic Cooperation (OIC) countries. It delves into the construction of the Financial Development Index (FD Index), a comprehensive measure encompassing the depth, access, and efficiency of financial institutions and markets. Through a literature review, the paper synthesizes the concept and measurement of FD Index. Furthermore, it examines the trends of FD Index in the selected OIC countries namely Turkey, Malaysia, Saudi Arabia, Indonesia, and Pakistan. The paper identifies significant progress in some areas while recognizing persistent challenges in others, underscoring the need for tailored financial sector reforms. By offering a granular analysis within the OIC context, this study contributes to financial economics, aiming to enrich the dialogue on FD and provide empirical insights that can guide future research and policy initiatives.

Keywords: Financial Development, Financial Development Index, Organization of Islamic Cooperation (OIC) Countries, Financial Institutions, Financial Markets.

1.0 Introduction

Financial development (FD) is an integral component of the economic fabric that underpins the growth and development trajectories of nations. Its significance is universally acknowledged, with a burgeoning consensus that a robust financial sector is not merely a byproduct of economic growth, but a fundamental driver of it. The role of FD in facilitating investment, enabling efficient resource allocation, and fostering economic dynamism cannot be overstated.

FD is a multifaceted concept that has been extensively studied in economic literature. At its core, it pertains to the evolution and enhancement of financial institutions and markets, which in turn improves the efficiency and accessibility of financial services. Schumpeter (1911) is often cited as one of the early pioneers in recognizing the significance of FD, emphasizing its role in facilitating entrepreneurial activities and innovation through efficient capital allocation. In this paper, FD can specifically define as the process of improving financial systems in terms of its depth and breadth; including broad and efficient financial market, and stable financial institutions. It shows the sector's ability to effortlessly unite and disperse resources, encourage investments, cope with risks and sustain economic stability. A well-functioning advanced financial system underpinned by the ability of banking sectors, capital markets and non-banking financial institutions to efficiently allocate resources, enable investment and promote innovation to drive sustainable economic growth.

The Financial Development Index (FD Index) emerges as a critical measure in this context, offering a comprehensive view of the health and effectiveness of financial systems. This multi-dimensional index, which encompasses the depth, access, and efficiency of financial institutions and markets, provides nuanced insights into the intricate workings of a nation's financial sector. The FD Index serves as a vital barometer for policymakers and international investors alike, offering a gauge of a country's financial stability and potential for growth.

Various theories underpin the study of FD. The Financial Repression Theory posited by McKinnon (1973) and Shaw (1973) argues that government policies can stifle financial sector growth, suggesting that deregulation can spur development. Contrarily, the Market Failure Hypothesis contends that financial markets, left unregulated, can lead to suboptimal outcomes, thereby necessitating prudent government intervention.

The components of FD, including the depth, access, and efficiency of financial systems, have been analyzed in various studies. Levine et al. (2000) explored these dimensions, linking financial depth to a country's capacity to provide financial services relative to the size of the economy. Access has been connected to the inclusiveness of the financial system, as studied by Beck et al. (2007), who examined how access to financial services can stimulate economic participation across different societal segments.

In the context of the Organization of Islamic Cooperation (OIC) countries, the impetus for FD takes on additional layers of complexity and urgency. These economies, characterized by their cultural, political, and economic diversity, are at various stages of financial sector development. For many of these nations, FD is not just a means to enhance economic performance but also a strategic tool to achieve financial inclusion, reduce poverty, and create resilient economic systems that can withstand global economic shocks.
This conceptual paper aims to dissect the components that construct the FD Index , providing a critical examination of the constituent elements that define FD. It endeavors to illustrate the intricate balance between depth, access, and efficiency in creating a financial system that not only supports but propels economic activity. Furthermore, this paper seeks to elucidate the trends of FD within selected OIC countries, employing the FD INDEX as a pivotal tool for analysis and interpretation.

The paper is structured to first lay the foundation with a comprehensive literature review that synthesizes the existing body of knowledge on FD. Subsequently, it delves into a detailed analysis of the trends in FD within selected OIC countries, using empirical data to draw conclusions and propose recommendations. The paper culminates with a discussion that contextualizes the findings within the broader economic and financial discourse.

3.0 Concept and Measurement of Financial Development

The concept of FD encompasses a multitude of dimensions, including the depth, access, and efficiency of financial markets and institutions. In this paper, it can be seen that FD is a multifaceted concept that encompasses the evolution and sophistication of financial institutions, markets, and instruments, aiming to enhance the efficiency of financial intermediation and broaden access to financial services. At its core, FD is about creating a robust framework that facilitates the mobilization of financial resources, efficiently allocates them across the economy, and manages financial risks effectively. This process is crucial for stimulating economic growth, fostering entrepreneurship, and supporting sustainable development.

The methodologies for measuring FD have evolved over time. Initially, single indicators such as the ratio of private credit to GDP were used. However, more comprehensive indices have been developed to capture the complex nature of financial systems. Svirydzenka (2016) introduced a new FD Index by the IMF, which combines a variety of indicators to provide a more nuanced picture of FD across countries. In this paper, FD will also be measured by the FD index (FD Index) which is a relative ranking of countries on depth, access and efficiency of their financial institutions and financial markets.

Specifically, The FD Index is a composite measure that combines the Financial Institutions Index (FI) [1]and the Financial Markets Index (FM)[2], both of which were introduced by the

[1] The Financial Institutions Index (FI) is an encompassing measure that includes the Financial Institutions Efficiency Index (FIE), Financial Institutions Depth Index (FID), and Financial Institutions Access Index (FIA). Each segment is defined as follows:

i. FID: This index compiles information on the ratio of bank loans to the private sector and the GDP, alongside the proportion of GDP represented by mutual funds, pension funds, and the premiums for life and non-life insurance.

ii. FIA: This metric measures financial access through the availability of ATMs and bank branches, with a benchmark of one ATM and one bank branch per 100,000 adults.

iii. FIE: This index captures various indicators relevant to banking efficiency, including the spread between lending and deposits rates, the ratio of non-interest income to total revenue, the proportion of overhead expenses to total assets, return on equity, and the net interest margin.

[2] The Financial Markets Index (FM) is a comprehensive metric comprised of the Financial Markets Depth Index (FMD), Financial Markets Access Index (FMA), and Financial Markets Efficiency Index (FME). Each component is detailed as follows:

International Monetary Fund (IMF). By aggregating these two indices, a comprehensive FD Index is formed, providing a detailed metric for financial development. This approach to quantifying financial development is detailed in works by Sahay et al. (2015) and Svirydzenka (2016), which outline the following methodology in creating an overall FD measurement:

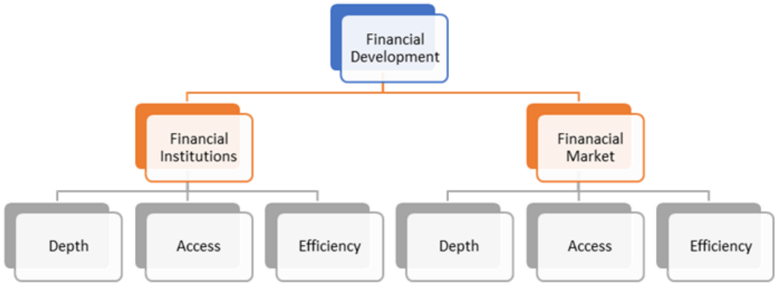

Figure 1: Financial Development Index

Based on Figure 1, efficiency in financial systems is defined as the ability of institutions to offer financial services affordably while maintaining sustainable revenues, combined with the vibrancy of activity in capital markets. The concepts of "depth" represent the size and liquidity of these markets, whereas "access" denotes the ease with which individuals and corporations can utilize financial services. This comprehensive and nuanced understanding of financial development (FD) aligns with the framework proposed by Čihák et al. (2012), which outlines key features of financial systems.

Comprehensively, it is critical to analyze the elements that form the FD Index. This index is divided into two primary segments: Financial Institutions and Financial Markets. Within these segments, there are sub-indices dedicated to evaluating depth, access, and efficiency.

The capitalization of listed businesses and outstanding bonds as a proportion of GDP for markets, and the number of deposits and loans as a percentage of GDP for institutions, are common metrics used to assess depth. The depth of financial institutions has increased significantly in several OIC nations, as seen by a consistent growth in the private sector credit

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i. FME: This index focuses on the economic scale of the stock market, analyzing the size of stock market capitalization relative to GDP, the volume of trade compared to GDP, and the proportion of government and corporate (both financial and non-financial) foreign debt securities to GDP.

ii. FMD: This segment gathers data on the diversity of the market by measuring the market capitalization of companies outside the top ten largest, as well as the density of debt issuers, including both domestic and foreign, nonfinancial and financial corporations, per 100,000 people.

iii. FMA: This index assesses market liquidity by examining the turnover ratio, which compares the volume of stocks traded to the total market capitalization.

to GDP ratio. The breadth of financial markets varies by country, though, with some exhibiting rapidly expanding stock markets and others still unable to fully utilize market-based funding.

On the other hand, access is gauged by indicators such as the number of bank branches and ATMs per capita for institutions, and the number of listed companies and bond issuers for markets. OIC countries have shown divergent trends, with some exhibiting rapid growth in financial access, driven by technological advancements such as mobile banking, while others lag due to infrastructural and regulatory constraints.

Another component is Efficiency which evaluated through metrics such as the net interest margin and overhead costs for institutions, and turnover ratios for markets. The trend in many OIC countries indicates improving efficiency, especially where regulatory reforms have been implemented. Nonetheless, efficiency gains in the financial sector have not been uniform across all member states.

4.0 Financial Development in selected OIC Countries

As the literature on FD in OIC countries is growing, with studies examining the specific challenges and opportunities within these economies. This paper highlights the trend of FD Index for the selected Organization of Islamic Cooperation (OIC) countries, the trend of FD over time provides a critical understanding of the economic progress and the evolving nature of their financial systems. Five countries been selected for this paper namely Turkey, Malaysia, Saudi Arabia, Indonesia and Pakistan.
Turkey is one of the largest OIC countries with a diversified economy and a well-developed financial sector. It can provide insights into the relationship between FD, institutional quality, and economic growth in a middle-income country with a large and diversified economy.

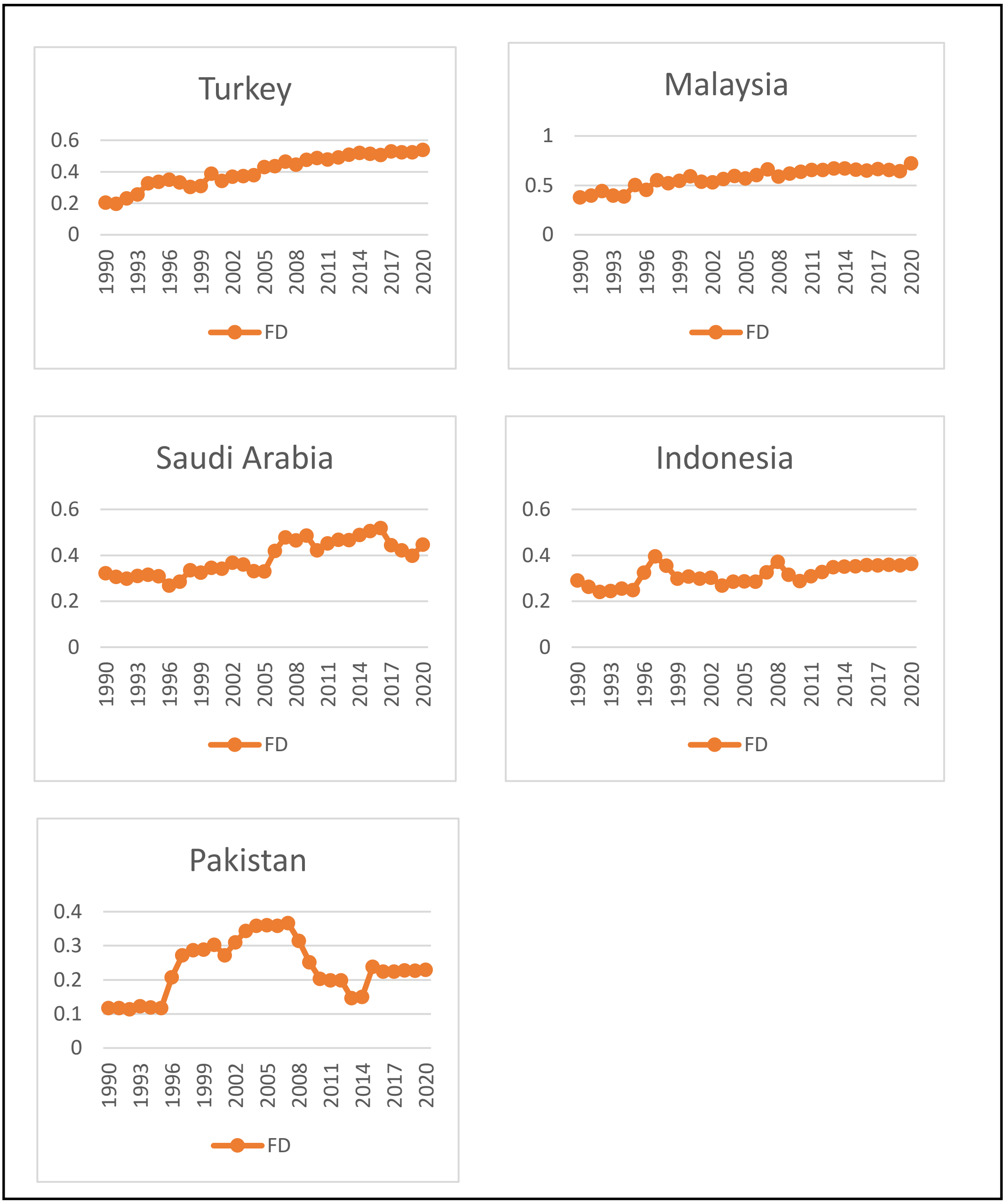

Figure 2: Financial Development Index for Selected OIC Countries.

Meanwhile, Malaysia is a high-income OIC country that has undergone significant economic development and transformation over the past few decades. It has a well-developed financial sector and strong institutional quality, which can provide insights into the role of institutional quality in promoting sustainable economic growth.

Saudi Arabia is one of the largest OIC countries with a significant share of global oil reserves. It has a relatively underdeveloped financial sector, but recent reforms have aimed to promote FD and diversification of the economy. It can provide insights into the role of FD in promoting economic diversification and sustainable growth. On the other hand, Indonesia is a middle-income OIC country with a large and growing population and a relatively underdeveloped financial sector. It can provide insights into the relationship between FD, institutional quality, and economic growth in a country with a rapidly growing economy and a large and diverse population.

Lastly, Pakistan is a low-income OIC country with a significant potential for economic growth. It has a relatively underdeveloped financial sector, but recent reforms have aimed to promote FD and improve institutional quality. It can provide insights into the role of FD and institutional quality in promoting sustainable economic growth in a low-income country. Figure 2 illustrates the trend of FD Index in these five countries, respectively.

Based on Figure 2, Turkey’s FD has been characterized by significant reforms, leading to enhanced financial depth. The banking sector has experienced consolidation, resulting in more robust and efficient financial institutions. Capital markets have also expanded, although they still represent a smaller portion of the financial system compared to banks. Starting from a lower point, Turkey's FD Index shows an ascending pattern with some minor fluctuations. The overall increase suggests that Turkey has been developing its financial sector, enhancing services like banking, investment, and insurance. The graph does show some periods where the index dips slightly, indicating temporary setbacks or slower growth during those times.

Conversely, Malaysia stands out as one of the most financially developed OIC countries, with a well-established Islamic finance industry. The depth and efficiency of both financial institutions and markets have seen continuous improvement, and access to financial services is among the highest within the OIC. Malaysia's graph is relatively smooth, showing less volatility compared to other countries. The graph exhibits the FD Index starts off higher than the others and consistently trends upward, which might reflect Malaysia's well-established financial markets and institutions.
The slight fluctuations could be attributed to market corrections or policy changes but don't signify any major financial instability.

As for Saudi Arabia, FD has been traditionally concentrated in the banking sector, with substantial government investment driving depth. Recently, efforts to diversify the economy have included initiatives to develop capital markets as part of the Vision 2030 reform plan. The graph for Saudi Arabia shows a more pronounced zigzag pattern, with peaks and troughs, but within an upward trend. This indicates that while Saudi Arabia's FD is growing, it is subject to more frequent changes that could reflect economic reforms, fluctuations in oil prices (given its oil-based economy), or other market factors. Despite the volatility, the overall trend is positive, showing long-term growth in FD.

Indonesia has witnessed a growing trend in FD, driven by economic growth and a burgeoning middle class. While the banking sector dominates, there is increasing attention to broadening market-based financing options. Indonesia's FD Index shows the least amount of change over time among the five countries. The trend is mostly flat with a very slight upward slope, suggesting a stable but slowly growing financial sector. The stability might indicate a resilient financial system, but the slow growth could also imply a cautious approach to financial sector reforms or development.

Lastly, Pakistan's financial sector which shown modest improvements in depth and access, with microfinance playing a significant role in enhancing financial inclusion. However, market efficiency remains an area requiring further development. However, based on the graph, Pakistan's trend is the most dramatic, with significant spikes and dips. The sharp peak in the graph indicates a period of rapid FD, which could be due to several factors such as policy changes, economic stimulus, or an influx of foreign investment. The subsequent sharp decline could represent a correction or a period of political or economic instability. Towards the end of the graph, there is a recovery, suggesting efforts to stabilize and grow the financial sector are having an effect.

5.0 Policy Implications and Conclusion.

Based on the data, each country's FD Index trend is influenced by a complex mix of economic policies, political stability, global economic conditions, and internal financial reforms. The upward trends indicate progress, but the path each country takes is unique, with different levels of volatility and growth rates which highlight progress in some areas while pointing to persistent challenges in others. The analysis provides a nuanced understanding of each country's financial landscape, serving as a foundation for policymakers to build upon for future financial sector reforms and economic growth strategies.

Given this, For Turkey, Saudi Arabia and Pakistan which showing volatility in their FD Index, there is a need to strengthen financial institutions to provide stability. This can include improved regulatory frameworks, risk assessment capabilities, and financial buffers. Also, for Saudi Arabia which might be affected by oil price volatility, diversifying the economy can help stabilize the FD index. This can be done by investing in non-oil sectors like tourism, entertainment, and technology. As for Indonesia and Pakistan, they are encouraged to have a more dynamic financial sector, policies could focus on improving access to financial services, especially in underserved areas. This includes microfinance, mobile banking, and fintech innovations. For all, investing in financial technology can help modernize financial sectors, make services more accessible, and increase efficiency. Policies that support innovation and technology adoption can be beneficial.

In conclusion, while each country has its own set of challenges and opportunities, a focus on strengthening financial institutions, ensuring inclusive access to financial services, diversifying economies, and embracing technology can contribute to more robust and steadier FD. Regular review and adjustment of policies, as well as a proactive approach to anticipated global economic shifts, will be key to sustaining positive trends in the FD Index.

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